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the tablet, a slit is held close to it, in such a position as to be seen, projected partly on the object and partly on the tablet, and the slit is then viewed through a prism. The fluorescence of the object is evidenced by light appearing in regions of the spectrum, in which, in the case of the rays coming through the principal absorbent, and, therefore, in the case of the rays scattered by the tablet, there is nothing but darkness.

The author states that these methods proved to be of such delicacy, that, even on an unusually gloomy day, he was able readily to detect the fluorescence of white paper; and even in the case of substances standing much lower in the scale, the fluorescence could be detected in a similar manner.

In conclusion, the author states that he had found the property of fluorescence to belong to a peculiar class of salts, the platinocyanides, making a third instance in which this property had been connected with substances chemically isolated in a perfectly satisfactory way. The present instance opens a new field of inquiry in relation to the polarization of the fluorescent light.

8. "Researches in Embryology; a Note supplementary to Papers published in the Philosophical Transactions for 1838, 1839 and 1840, showing the confirmation of the principal facts there recorded, and pointing out a correspondence between certain structures connected with the Mammiferous Ovum and other Ova." By Martin Barry, M.D., F.R.S., F.R.S.E. Received May 27, 1853.

Referring to his account of the process of fecundation of the mammalian ovum and the immediately succeeding phenomena, published in various papers in the Philosophical Transactions, the author calls attention to the confirmation which his views have received from corresponding observations made by subsequent inquirers on the ova of other animals. He more particularly adverts to a recently published memoir by Dr. Keber, in which that physiologist describes the penetration of the spermatozoa into the interior of the ovum, in *Unio* and *Anodonta*, through an aperture formed by dehiscence of its coats, analogous to the micropyle in plants.

Small pellucid vesicles, lined with ciliated epithelium and enclosing a revolving mulberry-like object, such as the author discovered imbedded under the mucous membrane of the rabbit's uterus and described in the Philosophical Transactions for 1839, have been likewise observed by Keber, not only under the mucous membrane, but also and most frequently in some part of the cavity of the abdomen. Keber considers these bodies to be fecundated ova. The author agrees with Keber in considering them to be ova, but he does not suppose them to be fecundated, nor does he think that their membrane is the vitellary membrane ("zona pellucida"), which he believes to have been absorbed. He considers such ova to have been detached from the ovary along with their containing ovisac, which in their new situation constitutes the ciliated capsule, and as they present themselves in unimpregnated animals, he now believes that the formation of a mulberry-like group of cells from the germinal

spot and the process of division and subdivision of the latter take place without fecundation ; but when this happens, the mulberry is not found to contain one cell larger than the rest, the nucleus of which, according to his observations, is the embryo. He is further of opinion, that in all cases of separation of ova, the ovisac or internal coat of the Graafian follicle is detached from the ovary, either entire and along with the ovum, as in the instances alluded to, or after the ovum has first escaped by rupture, as in the instance of the fecundated ovum.

The author is led to the following conclusions with reference to the structures connected with the ovum in different animals :—1. That in the mammalia the vesicle he described as the foundation of the Graafian follicle, and termed the ovisac, *does not remain permanently in the ovary, but is expelled and absorbed.* 2. That in the Bird, the ovum, when escaping from the ovary, is accompanied by the corresponding vesicle—the ovisac ; and that *the ovisac becomes the shell-membrane of the Bird's egg.* 3. That the expelled and lost ovisac in the mammalia therefore corresponds to the shell-membrane in the Bird. 4. That after the formation of the ovum the albuminous contents of the ovisac in the mammalia correspond to the albumen in the Bird's egg. 5. That the author's retinacula in the mammalia, after all, find their analogue in the chalazæ of the Bird ; and that both have their origin in the granular contents of the ovisac, which at an early period are in appearance just the same in both. 6. That the shell-membrane of the Bird is thus a primary cell.

He then points out the position which from his observations is to be assigned to the several parts of the ovum in the language of "cells;" and shows the presence of a plurality of ova in a Graafian follicle to be referable to the same cause as that producing more than one yolk (ovum) in the Bird's egg.

The Society then adjourned over the Vacation to Thursday, November 17, 1853.